

Chapter 1. Who is most at risk of HIV infection?

Chapter 1 presents six profiles to describe the Massachusetts populations most at risk of HIV infection. The first is a profile of people diagnosed and reported with HIV infection (with or without a concurrent AIDS diagnosis) from 1999-2001, the most current available indicator of the direction of the epidemic. Prevention programs need to be ahead of the epidemic curve to minimize the spread of new infections. Data describing individuals with recent HIV diagnoses provide useful information for planning and targeting HIV prevention programs.

Some caution must be exercised when interpreting these data. Recent diagnoses do not necessarily indicate recent infections. Surveillance data include only those individuals who test positive for HIV, and are then seen by a health care provider who reports the diagnosis to the HIV/AIDS Surveillance Program (HASP). The profile of recently diagnosed people does not include individuals who do not yet know their status, or those who know their status and are not yet in care or for whom a health care provider has not yet reported the case to HASP.

Section I. Profile of People Diagnosed with HIV from 1999-2001

Table 1.1 People Diagnosed with HIV Infection by Gender and Race/Ethnicity: MA, 1999-2001¹		
HIV 1999-2001		
Gender:	N	%
Male	2,223	70%
Female	961	30%
Race/Ethnicity:	N	%
White (non-Hispanic)	1,299	41%
Black (non-Hispanic)	1,015	32%
Hispanic	771	24%
Asian/Pacific Islander	68	2%
American Indian and Alaskan Native	8	0.3%
Not Specified	23	1%
TOTAL	3,184	
¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data as of 7/1/02		

- From 1999 – 2001, there were 3,184 people diagnosed and reported with HIV infection in Massachusetts.
- The majority of people diagnosed with HIV infection in the past three years (1999 – 2001) are male (70%).
- Fifty-nine percent of people recently diagnosed with HIV infection (from 1999 – 2001) are people of color: 32% Black (non-Hispanic), 24% Hispanic, 2% Asian/Pacific Islander, and less than 1% American Indian/Alaska Native. In contrast, people of color represent only 18% of the total Massachusetts population.

Table 1.2 People Diagnosed with HIV Infection by Exposure Mode: MA, 1999-2001¹		
	HIV 1999-2001	
Exposure Mode²:	N	%
Male-to-male sex	931	29%
Injection Drug Use	762	24%
Male-to-male sex and Injection Drug Use	57	2%
Heterosexual Sex	460	14%
◦ Heterosexual Sex w/ an Injection Drug User	160	5%
◦ Heterosexual Sex w/ a person w/ HIV or AIDS	285	9%
◦ Heterosexual Sex w/Bisexual male	11	0.3%
◦ Other Heterosexual Sex	4	0.1%
Presumed Heterosexual	733	23%
Blood / Blood products	17	1%
No Identified Risk	224	7%
Total	3,184	
¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; ² See the Glossary for an explanation of Exposure Mode categories Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding) Data as of 7/1/02		

- Male-to-male sex is the leading reported risk for HIV infection among people recently diagnosed (from 1999 – 2001), accounting for 29% of all cases.
- The second leading risk for HIV infection among the recently diagnosed is their own injection drug use, which accounts for 24% of exposures. An additional 5% of cases reported exposure through heterosexual sex with an injection drug user.

Note: the category of presumed heterosexual is created to re-assign people who are reported with no identified risk but who are known to have denied all other risks except the possibility of heterosexual sex with a partner of unknown HIV status. As such, it is still not clear what the exposure risk is for people in this category and any comparisons should be interpreted with caution.

Table 1.3 People Diagnosed with HIV Infection by Age at Diagnosis: MA, 1999-2001¹		
HIV 1999-2001		
Age in Years:	N	%
Under 13	-- ²	-- ²
13 to 19	55	2%
20 to 24	161	5%
25 to 29	357	11%
30 to 34	643	20%
35 to 39	752	24%
40 to 44	550	17%
45 to 49	337	11%
50+	324	10%
Total	3,184	
<p>1 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 2 Data on Pediatric cases of HIV are not included here, for more information contact the Pediatric Spectrum of Disease Project, MDPH Bureau of Communicable Disease Control</p> <p>Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding) Data as of 7/1/02</p>		

- Seven percent of people diagnosed with HIV infection from 1999 – 2001 were adolescents (13 – 24 years old).
- Seventy-two percent of people diagnosed with HIV infection from 1999 – 2001 in Massachusetts were between the ages of 25 and 44 years old.
- People ages 50 years old and over accounted for 10% of HIV diagnoses from 1999 – 2001. (See Figure 1.1)

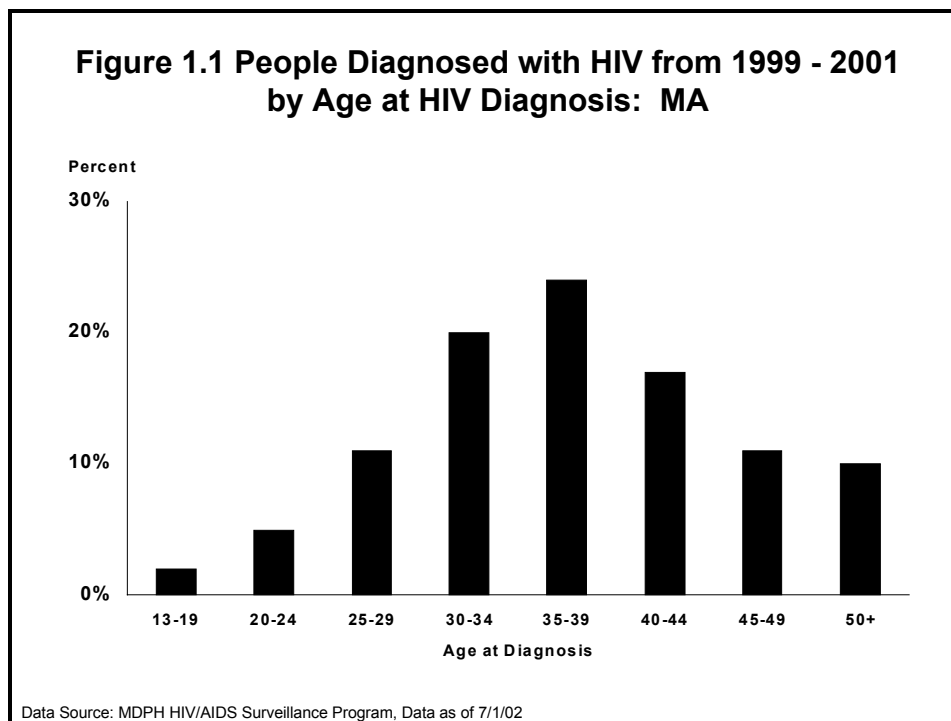


Table 1.4 People Diagnosed with HIV Infection by Health Service Region (HSR)¹: MA, 1999-2001²

HIV 1999-2001		
Health Service Region	N	%
Boston HSR	964	30%
Metro West HSR	395	12%
Central HSR	225	7%
Northeast HSR	452	14%
Southeast HSR	474	15%
Western HSR	433	14%
Prisons ³	240	8%
Unknown	1	0.03%
Total	3,184	

1 Reflects the health service region of a person's residence at the time of report (not necessarily current residence); 2 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 3 HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding) Data as of 7/1/02

- Across health service region of residence, the Boston HSR was the residence of the largest proportion of people diagnosed with HIV infection from 1999-2001 in Massachusetts (30%). (See Figure 1.2)

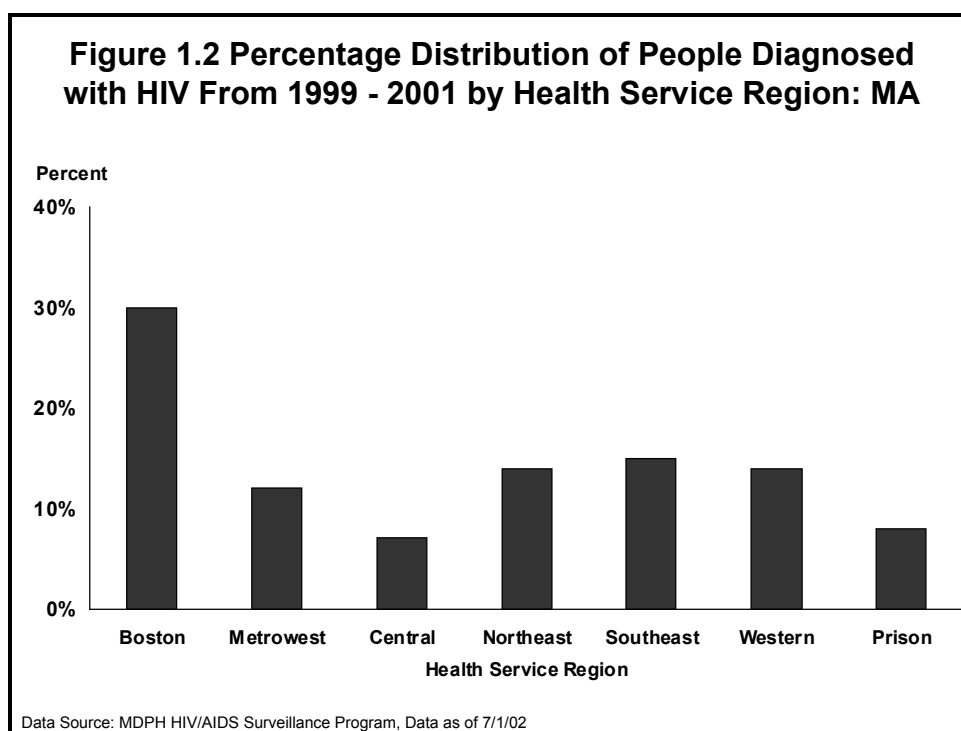


Table 1.5 People Diagnosed with HIV Infection by Gender and Race/Ethnicity: MA, 1999-2001¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White NH	1,040	47%	259	27%
Black NH	578	26%	437	45%
Hispanic	535	24%	236	25%
API	52	2%	16	2%
AI/AN	2	0.1%	6	0.6%
Unknown	16	0.7%	7	0.7%
Total	2,223		961	

¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 7/1/02

- While the largest proportion of males by race/ethnicity diagnosed with HIV infection in the past three years (1999-2001) is White (47%), the largest proportion among females is Black (45%). (See Figure 1.3)

- Hispanics account for about one quarter of both males and females diagnosed with HIV infection from 1999 – 2001.

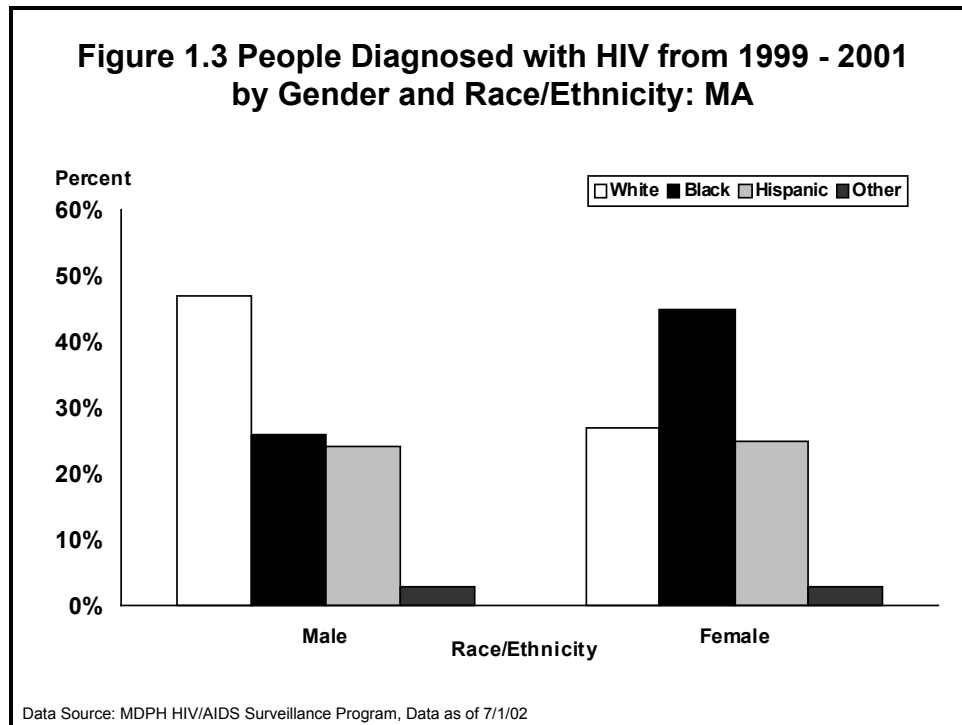


Table 1.6 People Diagnosed with HIV Infection by Gender and Exposure Mode: MA, 1999-2001¹

Exposure Mode:	Male		Female	
	N	%	N	%
MSM	931	42%	--	--
IDU	533	24%	229	24%
MSM/IDU	57	3%	--	--
HTSX	158	7%	302	31%
Pres. HTSX	370	17%	363	38%
Other	10	0.4%	7	0.7%
NIR	164	7%	60	6%
Total	2,223		961	

¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; MSM = Male-to-male sex, IDU = Injection Drug Use, HTSX = Heterosexual Sex, Pres. HTSX = Presumed Heterosexual Sex, NIR = No Identified Risk
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- For males, male-to-male sex is the primary reported risk for HIV infection among people diagnosed with HIV from 1999 - 2001 (42%), followed by injection drug use (24%). (See Figure 1.4)
- For females diagnosed with HIV infection from 1999 - 2001, presumed heterosexual sex accounts for the most frequent exposure to HIV (38%); this is followed by heterosexual sex with a partner of known serostatus or risk (31%). (See Figure 1.4)

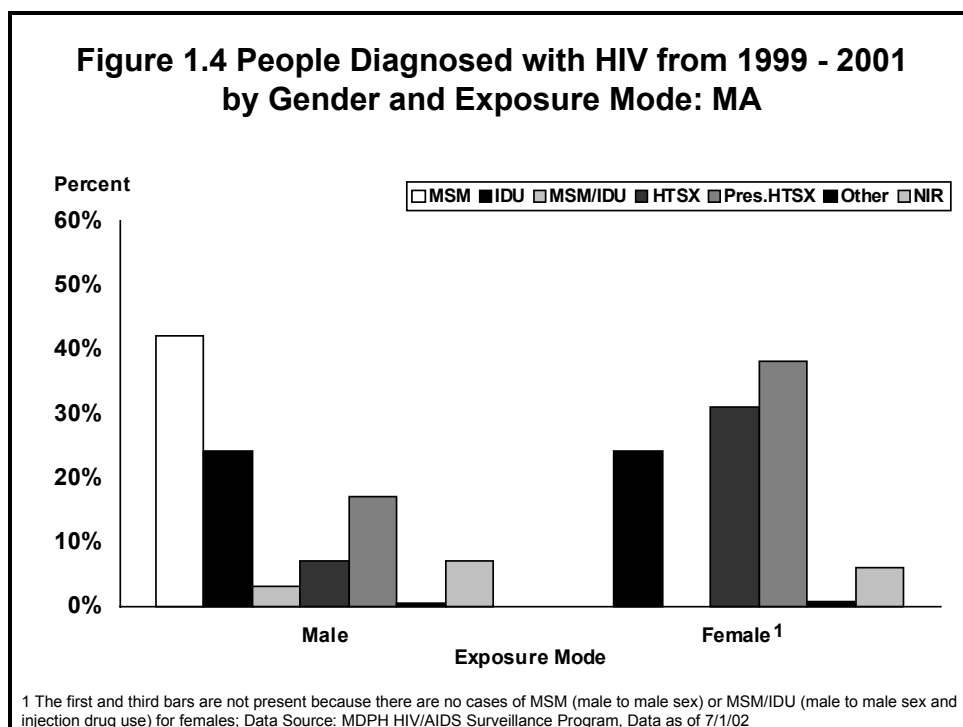


Table 1.7 People Diagnosed with HIV Infection by Race/Ethnicity and Exposure Mode: MA, 1999-2001¹

Exposure Mode:	White NH		Black NH		Hispanic		API		AI/AN	
	N	%	N	%	N	%	N	%	N	%
MSM	651	50%	119	12%	129	17%	22	32%	1	-- ²
IDU	279	21%	194	19%	278	36%	3	-- ²	4	-- ²
MSM/IDU	37	3%	12	1%	8	1%	0	0%	0	0%
HTSX	108	8%	172	17%	167	22%	10	15%	2	-- ²
P. HTSX	145	11%	407	40%	150	19%	22	32%	1	-- ²
Other	7	0.5%	9	1%	1	0.1%	0	0%	0	0%
NIR	72	6%	102	10%	38	5%	11	16%	0	0%
Total	1,299		1,015		771		68		8	

1 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 2 Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented; NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native, MSM = Male-to-male sex, IDU = Injection Drug Use, HTSX = Heterosexual Sex, P. HTSX = Presumed Heterosexual Sex, NIR = No Identified Risk
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)
Data as of 7/1/02

- The distribution of people diagnosed with HIV infection from 1999 – 2001 across exposure mode varies by race/ethnicity.
- Among Whites diagnosed with HIV in the past three years (1999 – 2001), male-to-male sex is the primary reported risk for HIV infection, attributed to half of exposures.
- Among Blacks diagnosed with HIV in the past three years (1999 – 2001), heterosexual sex with a person of unknown HIV serostatus or risk (presumed heterosexual) accounts for the largest percentage of reported risk at 40%.
- Injection drug use is the leading reported risk for HIV infection among Hispanics diagnosed with HIV infection from 1999 – 2001, accounting for 36% of exposures.
- Male-to-male sex and heterosexual sex with a person of unknown HIV serostatus or risk (presumed heterosexual) both account for 32% of reported risk among Asian/Pacific Islanders diagnosed with HIV infection from 1999 – 2001. (Caution should be used in interpreting the data for Asian/Pacific Islanders because the total number of cases (N=68) is small).

Table 1.8 Males Diagnosed with HIV Infection by Race/Ethnicity and Exposure Mode: MA, 1999-2001¹

Exposure Mode:	White NH		Black NH		Hispanic		API		AI/AN	
	N	%	N	%	N	%	N	%	N	%
MSM	651	63%	119	21%	129	24%	22	42%	1	-- ²
IDU	164	16%	144	25%	220	41%	2	-- ²	1	-- ²
MSM/IDU	37	4%	12	2%	8	1%	0	0%	0	0%
HTSX	36	3%	53	9%	65	12%	3	-- ²	0	0%
P. HTSX	89	9%	179	31%	82	15%	17	33%	0	0%
Other	5	<1%	4	1%	1	<1%	0	0%	0	0%
NIR	58	6%	67	12%	30	6%	8	15%	0	0%
Total	1,040		578		535		52		2	

¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native, MSM = Male-to-male sex, IDU = Injection Drug Use, HTSX = Heterosexual Sex, P. HTSX = Presumed Heterosexual Sex, NIR = No Identified Risk; ² Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The distribution of males diagnosed with HIV infection from 1999 – 2001 across exposure mode varies by race/ethnicity. (See Figure 1.5)
 - Among White males, male-to-male sex is the primary reported risk for HIV infection, attributed to 63% of exposures.
 - Among Black males, exposure mode is more evenly distributed with presumed heterosexual sex accounting for 31% of exposures, injection drug use 25%, and male-to-male sex accounting for 21%.
 - Among Hispanic males, injection drug use is the leading reported risk for HIV infection, accounting for 41% of exposures.

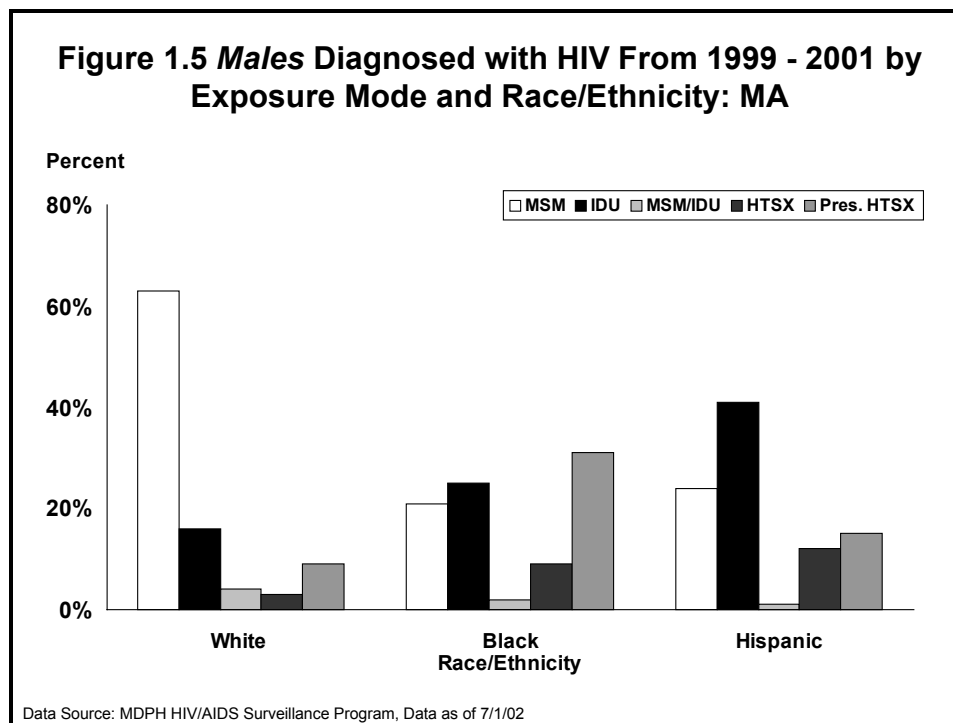


Table 1.9 Females Diagnosed with HIV Infection by Race/Ethnicity and Exposure Mode: MA, 1999-2001¹

Exposure Mode:	White NH		Black NH		Hispanic		API		AI/AN	
	N	%	N	%	N	%	N	%	N	%
IDU	115	44%	50	11%	58	25%	1	-- ²	3	-- ²
HTSX	72	28%	119	27%	102	43%	7	44%	2	-- ²
P. HTSX	56	21%	228	52%	68	29%	5	31%	1	-- ²
Other	2	1%	5	1%	0	0%	0	0%	0	0%
NIR	14	5%	35	8%	8	3%	3	-- ²	0	0%
Total	259		437		236		16		6	

¹ Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native, IDU = Injection Drug Use, HTSX = Heterosexual Sex, P. HTSX = Presumed Heterosexual Sex, NIR = No Identified Risk; ² Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The distribution of females diagnosed with HIV infection from 1999 – 2001 across exposure mode varies by race/ethnicity. (See Figure 1.6)
- While the predominant mode of exposure among White females diagnosed with HIV infection from 1999-2001 is injection drug use (44%), the predominant mode of exposure among Black females is presumed heterosexual sex (52%) and among Hispanic females is heterosexual sex (43%).

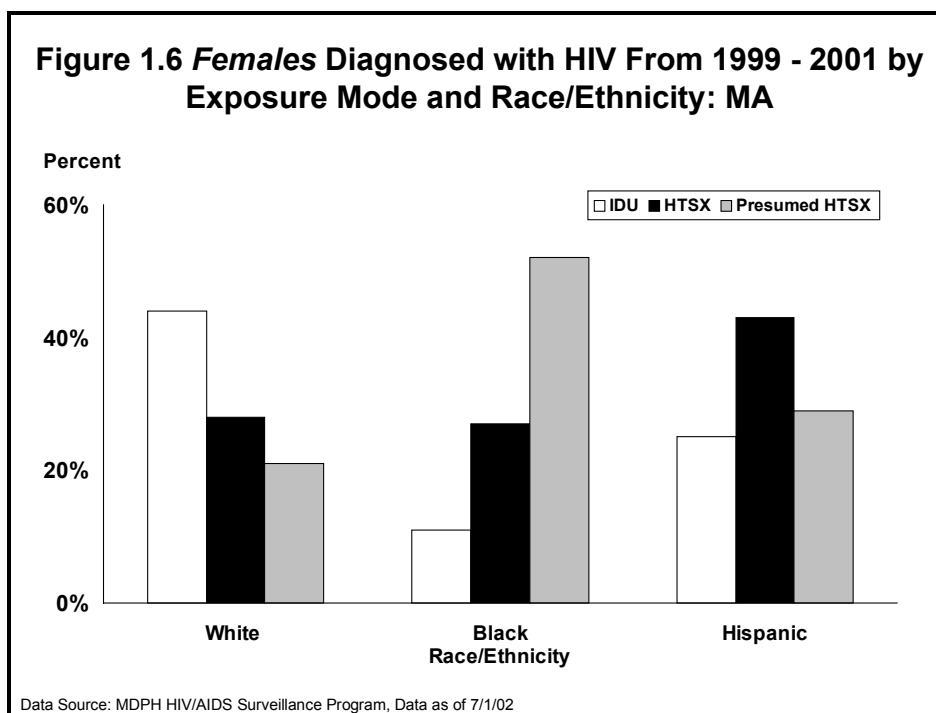


Table 1.10 People Diagnosed with HIV Infection by Health Service Region^{1,2} and Gender: MA, 1999-2001³

Health Service Region:	Male		Female		Total
	N	%	N	%	N
Boston HSR	691	72%	273	28%	964
Metro West HSR	272	69%	123	31%	395
Central HSR	148	66%	77	34%	225
Northeast HSR	307	68%	145	32%	452
Southeast HSR	331	70%	143	30%	474
Western HSR	282	65%	151	35%	433
Prisons ⁴	191	80%	49	20%	240

1 One individual of unknown residence is not included; 2 Reflects the health service region of a person's residence at the time of report (not necessarily current residence); 3 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 4 HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The Western and Central regions have the greatest percentage of females diagnosed with HIV infection from 1999 - 2001 at 35% and 34%, respectively.
- The Boston and Southeast regions have the greatest percentage of males diagnosed with HIV infection from 1999 - 2001 at 72% and 70%, respectively.

Table 1.11 Percent of People Diagnosed with HIV Infection by Health Service Region^{1,2} and Race/Ethnicity: MA, 1999-2001³

	White NH	Black NH	Hispanic	API	AI/AN	Total
Boston HSR	35%	44%	17%	3%	0.1%	964
Metro West HSR	49%	38%	11%	1%	0.0%	395
Central HSR	40%	25%	32%	2%	0.0%	225
Northeast HSR	45%	25%	24%	6%	0.4%	452
Southeast HSR	60%	25%	13%	1%	0.4%	474
Western HSR	28%	20%	51%	0.2%	0.2%	433
Prisons ⁴	27%	30%	42%	0%	0.8%	240

1 One individual of unknown residence is not included; 2 Reflects the health service region of a person's residence at the time of report (not necessarily current residence); 3 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 4 HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The distribution of people diagnosed with HIV infection from 1999 – 2001 across race/ethnicity varies by Health Service Region (HSR).
- Whites account for the largest percentage of people diagnosed with HIV infection from 1999 – 2001 in the Metro West (49%), Central (40%), Northeast (45%), and Southeast (60%) regions.
- Blacks account for the largest percentage (44%) of people diagnosed with HIV infection from 1999 – 2001 in the Boston region and Hispanics account for the largest percentage (51%) in the Western region. (See Figure 1.7)

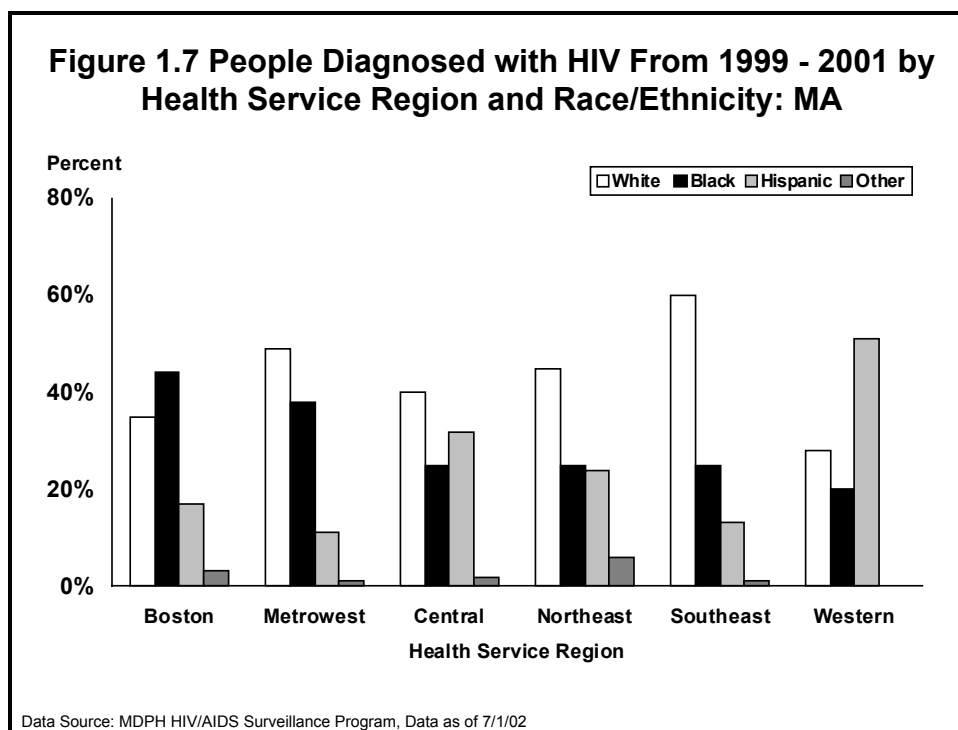


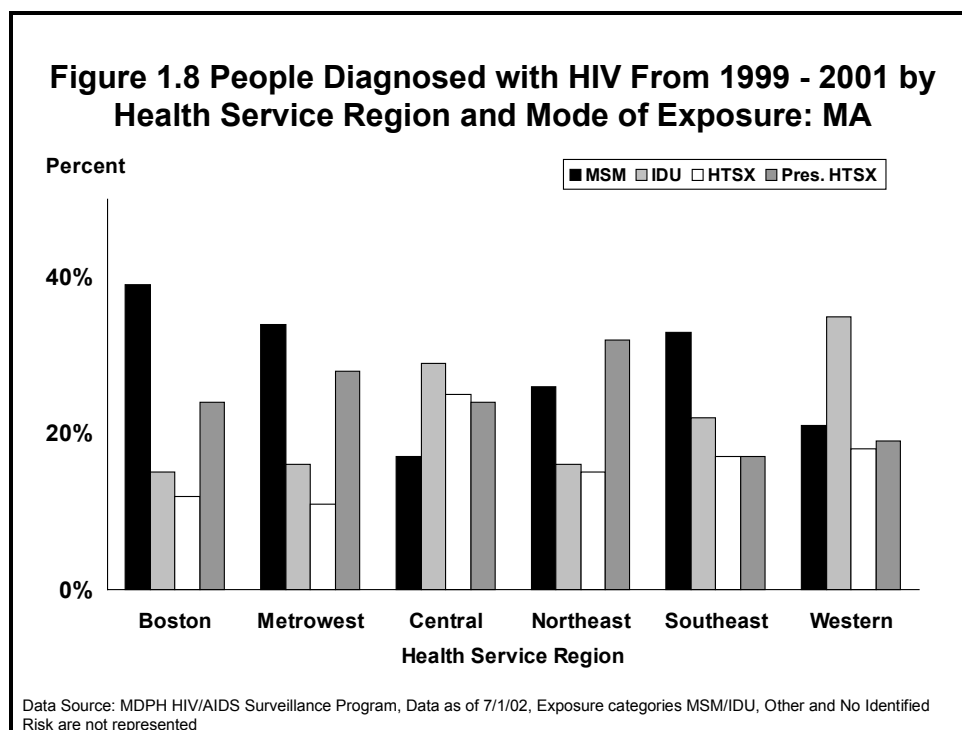
Table 1.12 Percent of People Diagnosed with HIV Infection by Health Service Region^{1,2} and Exposure Mode³: MA 1999-2001⁴

Health Service Region:	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
Boston HSR	39%	15%	2%	12%	24%	1%	7%	964
Metro West HSR	34%	16%	2%	11%	28%	0.3%	9%	395
Central HSR	17%	29%	2%	25%	24%	1%	2%	225
Northeast HSR	26%	16%	1%	15%	32%	1%	10%	452
Southeast HSR	33%	22%	3%	17%	17%	1%	8%	474
Western HSR	21%	35%	1%	18%	19%	0.2%	5%	433
Prison ⁵	7%	65%	3%	9%	12%	0%	4%	240

1 One individual of unknown residence is not included; 2 Reflects the health service region of a person's residence at the time of report (not necessarily current residence); 3 See the Glossary for an explanation of Exposure Mode categories. MSM = male-to-male sex; IDU = injection drug use; MSM/IDU = male-to-male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk; 4 Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis; 5 HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The distribution of people diagnosed with HIV infection from 1999 – 2001 across exposure mode varies by region.

- Male-to-male sex is the primary mode of exposure for people diagnosed with HIV infection from 1999 – 2001 in the Boston (39%), Metro West (34%) and Southeast (33%) regions.
- Injection drug use is the primary mode of exposure for people diagnosed with HIV infection from 1999 – 2001 in the Central (29%) and Western (35%) regions.
- In the Northeast region, presumed heterosexual sex is the attributed exposure among the largest percentage of people diagnosed with HIV infection from 1999 – 2001 at 32%. (See Figure 1.8)



Section 2. Maternal characteristics of HIV positive women who gave birth to children in the Pediatric Spectrum of Disease (PSD) Project in 2001

The data included in this section are provided by the Massachusetts Pediatric Spectrum of Disease Project (PSD). PSD collects data for HIV-infected and perinatally exposed children whose mothers are known to be HIV infected. Improved prenatal HIV counseling and testing and expanded access to effective treatments have greatly increased the likelihood that women with HIV infection will deliver healthy babies. The profile of HIV positive mothers enrolled in the PSD Project who gave birth to children from 2000-2001 in Massachusetts can help to target and inform programs designed to prevent the perinatal transmission of HIV.

Table 1.13 Maternal Characteristics¹ of HIV Positive Women Known to Have Given Birth: MA², 2000 - 2001³

Mother's Risk:	N	%
IDU	36	24%
Sex w/IDU	12	8%
Sex w/Male w/HIV/AIDS	20	13%
Transfusion	2	1%
No Identified Risk	81	54%
Maternal Age:	N	%
<20	5	3%
20-34	110	73%
35+	29	19%
Unknown age at delivery	7	5%
Maternal Race/Ethnicity:	N	%
White	39	26%
Black	61	40%
Hispanic	43	28%
Other/Unknown	8	5%
Maternal Birthplace:	N	%
US	79	52%
US Dependency	16	11%
Non-US ⁴	39	26%
Unknown	17	11%
Total (2 Years)	151	
¹ Data represents mothers of children with perinatal exposure to HIV only (not children exposed from other sources i.e. hemophilia, transfusion, etc.) ² Births in MA only ³ Two years of data have been combined to provide a more stable distribution ⁴ Includes Angola, Brazil, Burundi, Cambodia, Cameroon, Cape Verde Island, Central African Rep., Haiti, El Salvador, Ghana, Kenya, Nigeria, Peru, Rwanda, South Africa, Tanzania, Uganda, Zaire, and Zimbabwe Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2002		

- Twenty-four percent of women living with HIV infection known to have given birth in Massachusetts in 2000 and 2001 had an HIV risk related to injection drug use (injection drug use and sex with an injection drug user combined); 54% had no identified risk other than unprotected heterosexual contact.
- The majority of women living with HIV infection who gave birth in Massachusetts are women of color (40% Black and 28% Hispanic).

- Thirty-seven percent of women living with HIV infection who gave birth were born either outside the US (26%) or in a US dependency (11%). (See Figure 1.9)

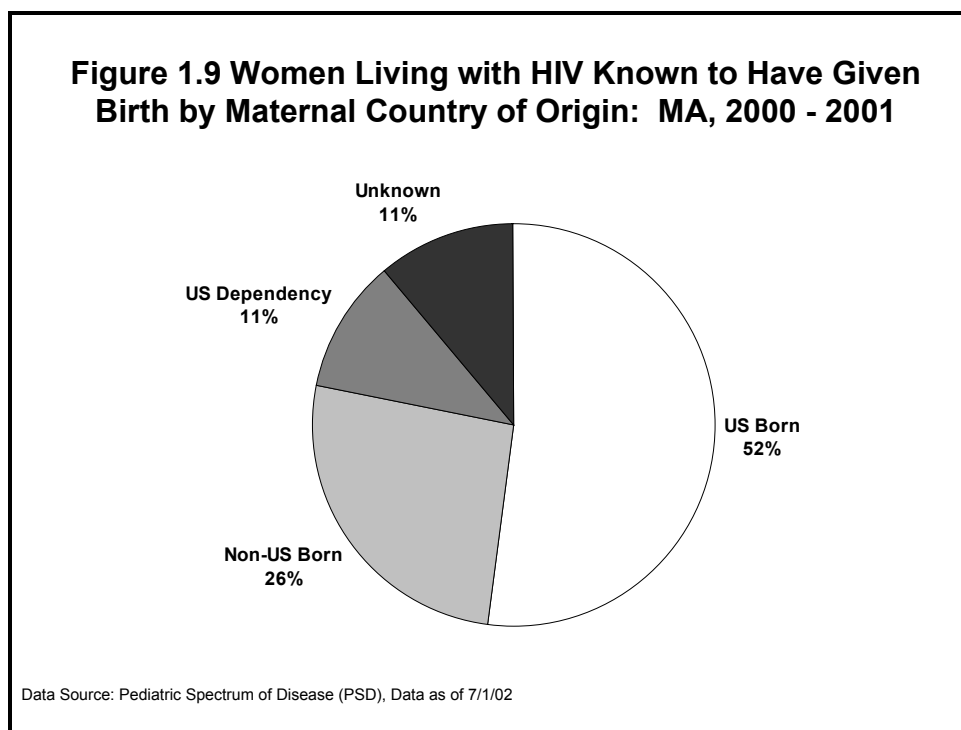
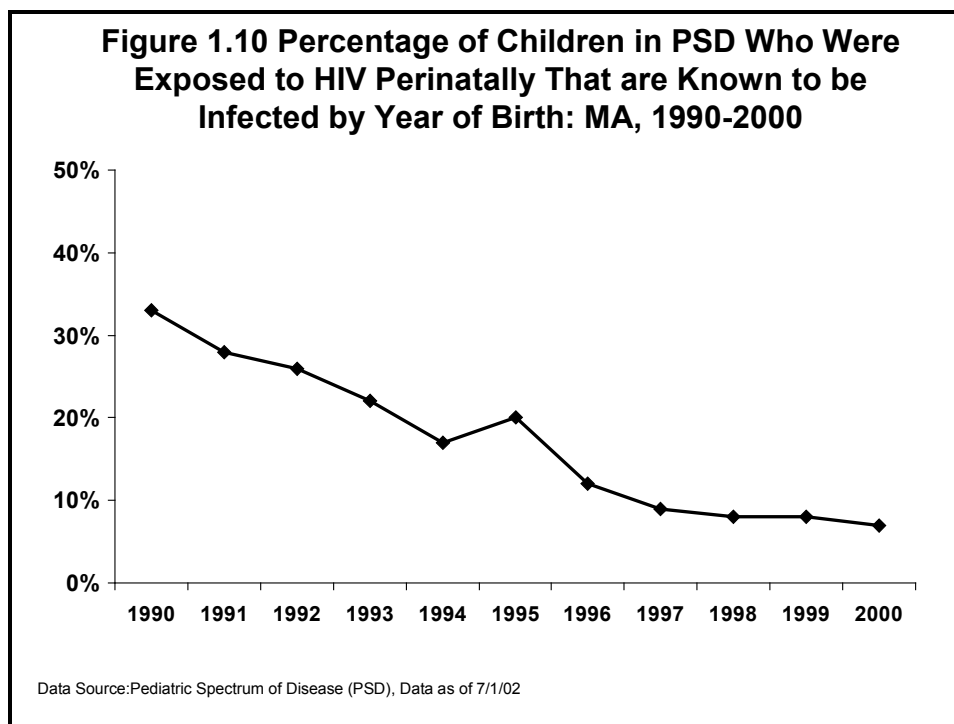


Table 1.14 Characteristics of Births to HIV Positive Mothers¹: MA 1990, 1995 and 2000

Year of Birth:	1990		1995		2000	
Total Number of Births to HIV-Infected Mothers:	94		100		90	
When Mother's HIV Infection was Diagnosed:	N	%	N	%	N	%
Before Child's Birth	67	78%	78	78%	86	96%
After Child's Birth	24	22%	22	22%	3	-- ³
Unknown	3	-- ³	0	0%	1	-- ³
Anti-Retroviral Therapy ² for Mothers Diagnosed Before Child's Birth:	N	%	N	%	N	%
Yes	-	-	70	90%	82	95% ³
No	-	-	2	3%	4	-- ³
Unknown	-	-	6	8%	0	0%
Mode of Delivery:	N	%	N	%	N	%
Caesarian Section	10	11%	20	20%	48	53%
Vaginal	77	82%	79	79%	40	44%
Unknown	7	7%	1	1%	2	-- ³
Infection Status of Child:	N	%	N	%	N	%
Infected	31	33%	20	20%	6	7%
Not Infected	62	66%	77	77%	61	68%
Unknown	1	-- ³	3	3%	23	25%
¹ Population includes only mothers of children with diagnosed HIV infection or exposure. MA births only ² This includes any therapy during pregnancy and/or during labor and delivery. No numbers are reported for 1991 because the value of antiretroviral treatment during pregnancy was still under study. ³ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2002						

- The percentage of HIV positive mothers who knew their HIV status before giving birth has increased from 78% in 1990 to 96% in 2000.

- Of women who knew their HIV positive status before giving birth in Massachusetts in 2000, 95% received antiretroviral therapy during pregnancy and/or during labor and delivery.
- The percentage of Caesarian section deliveries among births to HIV positive mothers peaked in 1999 at 59% and decreased to 53% in 2000 (and to 36% in 2001, data not shown). This decline is consistent with recent changes in practice standards to assess on a case-by-case basis the risk versus benefit of performing a Caesarian section delivery.



- The percentage of known HIV infection transmitted perinatally among mothers known to be HIV positive has decreased markedly from 33% (N=31) in 1990 to 7% in 2000 (N=6). (See Figure 1.10)

Section 3. Profile of people testing for HIV at publicly funded sites

Program utilization data for HIV/AIDS prevention services describe people who utilize these services and who may be at risk for HIV infection. In particular, data from HIV testing programs can be used to describe demographics and HIV risk behavior in a population. The following tables contain data on clients utilizing state-funded counseling and testing sites. These settings include community health centers, hospitals, jails, and sexually transmitted disease clinics. An estimated 30% of people who get tested for HIV in Massachusetts get tested at one of these sites. Therefore, these data are not representative of all people testing for HIV infection in Massachusetts.

Table 1.15 Number and Percent of Positive HIV Tests¹ by Gender, Race/Ethnicity, Age of Client and Risk Category: MA, 2001

HIV Tests by Gender of Client:	Total Tests	Total Positive Results	Percent Positive
Male	29,591	348	1%
Female	21,607	166	1%
Unknown	349	7	2%
HIV Tests by Race/Ethnicity of Client:	Total Tests	Total Positive Results	Percent Positive
White	23,567	108	<1%
African-American	8,030	134	2%
Latino	13,688	188	1%
Asian	1,019	10	1%
American Indian/Aleutian/Eskimo	210	0	0%
Haitian	922	35	4%
Brazilian	872	18	2%
Portuguese	760	3	<1%
Cape Verdean	708	6	1%
Other	1,088	10	1%
Unknown	683	9	1%
HIV Tests by Age of Client, in Years:	Total Tests	Total Positive Results	Percent Positive
Under 13	73	0	0%
13 to 19	4,700	9	<1%
20 to 24	11,811	31	<1%
25 to 29	8,792	61	1%
30 to 34	7,837	109	1%
35 to 39	6,531	109	2%
40 to 44	4,863	86	2%
45 to 49	2,892	61	2%
50+	4,039	54	1%
Unknown Age	9	1	11%
HIV Tests by Risk Category ² :	Total Tests	Total Positive Results	Percent Positive
Male Sex w Male (MSM)	4,272	109	3%
Male-to-male sex and Injection Drug Use (MSM/IDU)	247	9	4%
Injecting Drug User (IDU)	6,648	108	2%
Heterosexual Sex (HTSX)	37,310	261	1%
Other/No Identified Risk	3,070	34	1%
Total	51,547	521	1%
¹ Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table); ² Data collected on possible exposure on the C&T report form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Refer to the Glossary for an explanation of risk categories. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program. Data as of 7/1/02			

- In 2001, more males (57%, N=29,591) than females (42%, N=21,607) received HIV counseling and testing at publicly funded counseling and testing (C&T) sites.
- The majority of those tested were White non-Hispanic (46%, N=23,567) followed by Latinos (27%, N=13,688) and African-Americans (16%, N=8,030).
- More people age 20-29 (40%, N=20,603) were tested for HIV than in any other age category.
- The percent of total HIV tests that were positive was the same (1%) among males and females in 2001. (For males, the percent of positive HIV tests has declined from 4% in 1992; for females, the percent of positive HIV tests has declined from 2% in 1992. Data not shown.)
- More people tested positive for HIV antibody between the age of 35-44 years (2% for all subgroups) than people ages 34 years and under and 45 years and over (<1-1% for all subgroups).
- The majority of those tested reported heterosexual sex (72%, N=37,310) as their primary HIV risk behavior followed by injection drug use (13%, N=6,648) and male-to-male sex (9%, N=4,519).
- The highest percentage of positive HIV tests was among clients reporting male-to-male sex and injection drug use as their risk (4% MSM/IDU) followed by male-to-male sex (3%) and then injection drug use (2%).

Section 4. Behavioral Risk for HIV Infection

The following tables include behavioral data about number of sexual partners and condom use as reported by Massachusetts residents through anonymous telephone interviews. This ongoing random-digit-dial telephone survey, the Behavioral Risk Factor Surveillance System (BRFSS), covers a broad range of topic areas (including sexually related risk) and is part of a CDC-funded national survey program.

Sex with multiple partners has historically been correlated with other predictors of HIV transmission. Reducing numbers of sexual partners has been an HIV/STD prevention intervention goal as has increasing condom use. Data regarding the prevalence of each of these behaviors follows.

Table 1.16 Number Of Sexual Partners In Past Year Among Adults Ages 18-64 Years: MA, 2001				
	0 Partners	1 Partner	2 + Partners	N
Total:	14%	78%	8%	4,015
By Age:	0 Partners	1 Partner	2 + Partners	N
18-24	19%	57%	24%	396
25-34	7%	84%	9%	1,015
35-44	8%	87%	5%	1,127
45-64	21%	76%	3%	1,433
Sex:	0 Partners	1 Partner	2 + Partners	N
Male	12%	76%	12%	1,745
Female	16%	79%	5%	2,270
Race:	0 Partners	1 Partner	2 + Partners	N
White	13%	79%	8%	3,220
Black	18%	63%	19%	189
Hispanic	15%	78%	7%	405
Asian	20%	75%	5%	100
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001				

- Among 4,015 respondents to the 2001 Massachusetts BRFSS, 8% reported two or more partners, 78% reported one partner, and 14% reported no sexual partners in the past year.

- The largest proportions of people reporting two or more partners were young (24% of 18-24 year olds reported two or more partners) and were men (12% of men reported two or more partners compared to 5% of women).

Table 1.17 Number Of Sexual Partners In The Past Year, <i>Males</i> Ages 18-64: MA, 2001				
	0 Partners	1 Partner	2+ Partners	N
Total Males	12%	76%	12%	1,745
Age:	0 Partners	1 Partner	2+ Partners	N
18-24	19%	51%	30%	184
25-34	8%	77%	15%	427
35-44	7%	86%	7%	486
45-64	14%	80%	6%	631
Race:	0 Partners	1 Partner	2+ Partners	N
White	11%	77%	12%	1,430
Black	11%	58%	31%	76
Hispanic	11%	73%	16%	133
Asian	11%	82%	7%	56
Sex of Partner¹:	0 Partners	1 Partner	2+ Partners	N
Same	N/A	63%	37%	59
Opposite	N/A	87%	13%	1,450
¹ Only asked of sexually active adults Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001				

- Thirty percent of males ages 18-24 reported two or more sexual partners compared to 15% of males ages 25-34, 7% of males ages 35-44, and 6% of males ages 45-64.
- Thirty-seven percent of males with a same sex partner reported two or more sexual partners compared to 13% of males with an opposite sex partner.

Table 1.18 Number of Sexual Partners In the Past Year, <i>Females</i> Ages 18-64 MA, 2001				
	0 Partners	1 Partner	2+ Partners	N
Total Females	16%	79%	5%	2,270
Age:	0 Partners	1 Partner	2+ Partners	N
18-24	19%	64%	17%	212
25-34	5%	90%	5%	588
35-44	9%	88%	3%	641
45-64	28%	71%	1%	802
Race:	0 Partners	1 Partner	2+ Partners	N
White	15%	80%	5%	1,790
Black	27%	68%	5%	113
Hispanic	18%	81%	1%	272
Asian	†	--		44
Sex of Partner¹:	0 Partners	1 Partner	2+ Partners	N
Same sex	N/A	89%	11%	55
Opposite sex	N/A	95%	5%	1,733
¹ Only asked of sexually active adults Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001				

- Seventeen percent of females ages 18-24 reported two or more sexual partners compared to 5% of females ages 25-34, 3% of females ages 35-44, and 1% of females ages 45-64.

Table 1.19 Condom Use At Last Sexual Encounter, Adults Age 18-64¹: MA, 2001		
	Total N	% Used Condom
Total:	3,327	25%
Sex:	Total N	% Used Condom
Male	1,543	27%
Female	1,784	22%
Race:	Total N	% Used Condom
White	2,696	23%
Black	145	45%
Hispanic	323	24%
Asian	80	43%
Other	41	
Number of Partners:	Total N	% Used Condom
1	2,936	21%
2	192	49%
3+	156	65%
Sexual Orientation:	Total N	% Used Condom
Same Sex – Male	62	40%
Opp Sex – Male	1,470	27%
Same Sex – Female	54	23%
Opp Sex – Female	1,725	22%
¹ Only asked of sexually active adults Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001		

- Of 3,327 sexually active respondents to the BRFSS ages 18-64, 25% reported using a condom at last sexual encounter. (27% of male respondents and 22% of female respondents)
- Forty-five percent of Blacks and 43% of Asians reported condom use at last sexual encounter as opposed to 23% of Whites and 24% of Hispanics.
- Regarding sex with multiple partners, 65% of those reporting 3 or more partners also reported condom use at last sex.
- Of men reporting a same-sex partner, 40% reported condom use at last sex, while 27% of men with opposite-sex partners reported condom use at last sex.

Table 1.20 Ever Tested for HIV, Adults Age 18-64: MA, 1993 - 2001

Year:	Total N	% Ever Tested for HIV
1993	1,530	27%
1994	2,709	30%
1995	2,758	37%
1996	2,504	39%
1997	3,035	46%
1998	3,995	42%
1999	6,128	46%
2000	6,804	48%
2001	7,113	47%

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001

- From 1993 to 2001 the percentage of adults ever tested for HIV increased markedly from 27% to 47%.
- The percentage of adults ever tested for HIV has not changed significantly in the past three years (1999-2001).

Table 1.21 Ever Tested for HIV by Number of Sexual Partners, Adults Age 18-64: MA, 2001

	Total N	% Ever Tested for HIV
Total:	4,783	25%
Number of Partners:	Total N	% Ever Tested for HIV
0	704	33%
1	2,963	50%
2	192	56%
3+	161	69%

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2001

- Of 4,783 respondents to the 2001 BRFSS ages 18-64, 25% reported ever being tested for HIV infection.
- Thirty-three percent of respondents who reported no sexual partners in the past year were ever tested for HIV, compared to 50% of respondents reporting one partner, 56% reporting two partners, and 69% reporting three or more partners.

Section 5. HIV and syphilis seropositivity at selected STD clinics

The following table contains data on HIV and syphilis seropositivity (the percent of clients who tested positive for HIV or syphilis) at three publicly funded STD clinics. As these data are collected from only three selected STD sites in patients presenting with STD concerns, they are not representative of the general Massachusetts population. Nonetheless, since there is evidence that indicates increased HIV risk among individuals using publicly funded STD testing sites, these data provide an important snapshot of HIV prevalence over time in this population.

Table 1.22 Unlinked¹ HIV and Syphilis Seropositivity at Three Publicly Funded STD Clinics² : MA, 1990 – 2001			
By Year:	TOTAL TESTS	% HIV POSITIVE	% SYPHILIS POSITIVE
1990	4,075	4%	8%
1991	4,633	3%	7%
1992	4,053	3%	5%
1993	3,339	3%	4%
1994	2,705	2%	5%
1995	2,554	2%	4%
1996	2,390	3%	3%
1997	2,214	3%	4%
1998	2,369	3%	4%
1999	2,069	3%	3%
2000	2,005	2%	3%
2001	1,893	2%	3%
1 Information is collected in a way that preserves anonymity but allows analysis by selected variables 2 Tests performed at 3 selected publicly funded STD clinic sites. (People also test for HIV and Syphilis at non-publicly funded sites for whom data are not presented in this table) Data Source: MDPH Unlinked HIV Seroprevalence Program			

- HIV and syphilis seropositivity at publicly funded STD clinics has dropped steadily during the 1990's.
- Both HIV and syphilis seroprevalence has decreased by at least half since 1990.